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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,901	08/22/2003	Aaron James Gannon	H0003570--1623	1338

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EXAMINER	
WOODS, ERIC V	

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,901	GANNON, AARON JAMES	
	Examiner	Art Unit	
	Eric V. Woods	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see Remarks pages 1-4, filed 13 May 2005, with respect to the rejection(s) of claim(s) 1-4, 9-19, 21-24, and 29-39 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of various new references as set forth below.

The objection to claim 5 is withdrawn because applicant has amended the claim to correct the deficiency.

However, several things should be noted. Applicant argues that there is no teaching for a straight line that passes through the center of the display and an edge pixel. However, the definition of a line (e.g. the basic equation defining a two dimensional, linear relationship is found to be from basic geometry $y = m * x + b$, where that line extends infinitely along a two-dimensional plane. As such, a line -- which can be defined by two points, such as a zoom point and the center of a display, which has a form as follows: $(y - y_1) = (\frac{y_2 - y_1}{x_2 - x_1})(x - x_1)$ will inherently pass through an edge pixel of such a display, since such a line is infinitely long. (See definition of a line from the attached "Line" document from MathWorld).

Allowable Subject Matter

Claims 5-7, 20, 25-27, and 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Referring to claims 5 and 25, none of the prior art teaches of maintaining the position of the image edge point while changing the relative size of the selected zoom point.

Referring to claims 6 and 26, none of the prior art teaches of maintaining the alignment of each of the image points with the display area edge that includes the display area edge point while changing the relative size of the selected zoom point.

The indicated allowability of claims 8 and 18 is withdrawn in view of the newly discovered reference(s) to Grossman in view of Kamatani. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" in claims 1, 3, 8-9, 12, 15-17, 21, 23, 28, and 36 is a relative term that renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite

degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further, examination guidelines and MPEP 2173.05(b) clearly indicate that "substantially" is only statutory if the meaning and degree of the term are quantifiably defined in the specification (In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960), since it is a very broad term. Since applicant has not done so initially, any amendments to the specification and/or claims to add degree would be new matter and would not be entered. Examiner suggests canceling the term 'substantially' from all claims; otherwise, absent a showing of good and substantial reasons, **as well as citation of relevant case law**, such rejections will not be withdrawn.

The rest of the claims are dependent upon the above-mentioned claims and are rejected as not correcting the deficiencies of their parent claims.

Claims 1-40 are also rejected because the term "relative size" in all claims is also a relative term that renders the claims indefinite. Examiner suggests changing the wording "changing the relative size" to "scaling". The term "relative" is a relative term that renders the claim indefinite. The term "relative" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 21-22 are rejected under 35 U.S.C. 103(a) as unpatentable over Grossman et al (US PGPub 2002/0149605 A1) in view of Kamatani (US 6,178,264 B1).

As to claims 1 and 21,

In a display including one or more edges that define a display area in which at least a portion of an image is displayed, a method of changing the relative size of the image, comprising the steps of: (A display device must inherently have a bounded viewing area, as it has a maximum resolution (for example, most displays are limited to XGA resolution, that is 1024x768. See Grossman, Figure 3 for example, for the bounded display that has edges which define a display area – also, see Grossman Figure 1 where element 2 is the screen, with viewable area and a menu bar 5 beneath it)(The remainder of the preamble is only a recitation of an intended use and/or a summary of the claim, and is thusly ignored as per many CAFC/CCPA decisions (Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3de 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999), *Kropa v. Robie*, and the like).)

-Selecting a zoom point in the displayed image, the zoom point corresponding to a point in the displayed image that is to be zoomed; and (Grossman teaches selecting a zoom point on the screen using a stylus, as explained in [0006-0017], and as illustrated in Figure 1)

-Changing the relative size of the selected zoom point while translating the selected zoom point along a substantially straight zoom line that passes through the selected zoom point and extends between a central point in the display area and an edge point on the display are that is closest to the selected zoom point. (Grossman clearly teaches that various zoom functions can be applied to a selected point; see Figure 2 for a listing of these. Further, Grossman supports both zooming in and out by selecting buttons 6a and 6b on toolbar 5 in Figure 1 [0031], where the user selects the point by placing the stylus on it, and the point is enlarged until the stylus is removed [0033].

Grossman teaches mapping the zoom point as a zoom occurs towards the center of the screen automatically [0012-0014, particularly 0012-0013]. Note that Grossman clearly teaches that,"...where the point ... is distant from the center of the screen ... the centering means may therefore move the image ... so that it is **more** central to the screen ... e.g. by mapping the image point at the center of the zoom towards the center of the screen." This very clearly teaches that a mapping relationship exists such that the zoom point is translated towards the center of the display as the zoom factor is increased. The simplest form of such a mapping would in fact be a straight line. Many forms of mapping are conceivable, as are many different zoom functions that could be

applied, as listed in Figure 2. Moving the point towards the center makes it more visible, as in the cited documentation above, and in [0009, 0052, 0061].

However, applicant contends in Arguments pages 1-2 that the fact that a linear relationship and/or mapping is the simplest known translational relationship is not sufficient motivation. Examiner suggests that Grossman at least suggests such a mapping, in that any of the functions that could be applied to a zoom operation could also be just as easily applied to a mapping of a center point towards the center of the display. However, examiner concedes that Grossman does not **expressly** teach this limitation.

Reference Kamatani clearly teaches the use of a 'nozzle', which as can clearly be seen in Figures 3-5 is a square box constituting an image zoom area on the contour line of an object. Such an object may be moved along the edge of an object by an operator (1:54-2:25), where the definition of the nozzle is provided. One version of the system moves the zoomed area along **a straight line** that passes through **the center point** of the zoom area and **one extreme point**. The extreme point X, as shown in Figure 8 for example, is on the edge of the visible or zoomed in region 301, and the center point O is clearly in the center of the display region (see 8:30-45).

Clearly, the idea of moving or translating a zoom point or region along a straight line between an edge point and a center point is taught herein.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Grossman to use the straight line automatic zoom translation path of Kamatani, since Kamatani teaches (8:38-45) that

such movement requires no coordinate calculation for obtaining a new zoom area position, and as noted above (and as acknowledged by applicant on page 2 of Remarks) that the shortest distance between any two points is a straight line, and therefore this would again by the most obvious path for the movement of the zoom point to take during an operation **wherein it was being moved to the center of a display region anyway**. Additionally, by translating the zoomed portion along a straight line to the center point allows a user to visually conceive where the zoomed portion was originally located in relation to the original image.

Claim 21 is identical to claim 1, the specific differences being that the user interface is the stylus 4 and touch screen 2 specified above and shown in Grossman Figure 2 (see [0026—0029]), the display screen is element 2 in Grossman Figure 2, and the processor is inherent (see for example claim 12, 'a data-processing system'), and Kamatani also teaches a processor (CPU) and memory (RAM) in Figure 2. Clearly the system of Grossman is computer-implemented and thusly inherently requires processing means (e.g. a processor, which inherently requires memory) to execute such steps as a computer program or code executing on such processor.

As to claims 3 and 23,

Kaizuka does not teach of translating the selected zoom portion when the zoom area substantially coincides with the display area central point.

Grossman [0012] clearly teaches that the invention may map the point at which the zoom is centered is mapped to the center of the screen. It would be obvious that once the zoom point coincides with the center of the screen that it would no longer be

moved, since any motion away from the center of the screen would be compensated for such that the point would automatically return to the center of the screen. Therefore, Grossman disclose the invention as specified in the negatively limiting claims of claims 3 and 23.

As to claims 4 and 24,

Grossman teaches that the image is zoomed in and out in [0036-0037 and 0039-0042], where the distance between screen pixels of a map or the like in a Cartesian coordinate system will be increased after a zoom in. Clearly, since the display screen has finite size, this will prima facie involve the translation of at least some portion of the display screen off of the visible screen area, since the map is translating automatically to the center of the display if the image is being zoomed. Additionally, while zooming in further, it is obvious that a portion of the display area that is not part of the selected zoom area will be translated out of the displayed frame. One would have been motivated to make such a modification to the invention of Grossman so that a user may be able to further zoom in on an area of interest in order to view that section in greater detail.

As to claims 8 and 28, clearly Grossman teaches that the image is scaled around the specified zoom point; therefore, both the entire displayed image and the zoom point would be enlarged in a simultaneous manner, and "substantially simultaneously" is indefinite as noted above.

Claims 2 and 22 are rejected under 35 U.S.C. 103(a) as unpatentable over Grossman in view of Kamatani as applied to claims 1 and 21 above, and further in view of Kaizuka et al, an analogous art. Motivation for the combination of Kaizuka et al with the above references is provided in the rejection to claim 2, **and is incorporated by reference in all of the claims listed below, since those rejections are made under the same combination of references**.

As to claims 2 and 22, Grossman [0012] clearly teaches that the invention may map the point at which the zoom is centered is mapped to the center of the screen. It would be obvious that once the zoom point coincides with the center of the screen that it would no longer be moved, since any motion away from the center of the screen would be compensated for such that the point would automatically return to the center of the screen. However, Grossman does not expressly teach a maximum or minimum relative size.

Kaizuka et al. teaches of the invention of claims 2 and 22. Column 14, lines 1 – 3, states, "Thereafter, an image enlarged by a final zoom ratio and having a lower resolution than that of the image shown in FIG. 3C is displayed in the entire display frame 31, as shown in FIG. 3D." Lines 26 – 31 state, "In step S3, it is determined whether the image (zooming target) in the rectangular region 32 designated in step S1 is enlarged to the entire display frame 31. If NO in step S3, the flow advances to step S4 to increase the interpolation ratio and then returns to step S2 to perform the same processing as described above." Thus, Kaizuka teaches of inhibiting any further change in relative size once a final zoom ratio has been achieved. Additionally, Kaizuka

determines if the zoomed image is enlarged to the entire display frame such that the image reaches the central point in the display area and if so then stops processing the image.

Motivation for combining Grossman, Kamatani, and Kaizuka is taken from the fact that Kaizuka (2:65-3:20) provides a method for zooming images that does not require additional storage capacity, that can display images at high speed when zooming at the original precision (resolution), and the like, which would clearly improve the zooming capabilities of Grossman.

Kaizuka et al. teaches of the invention of claims 9 and 29. However, Grossman does not expressly teach this limitation, while Kamatani would seem to suggest it from the various of Figures 2-8. Kaizuka Figures 3A – 3E and 8A – 8D show a rectangular border surrounding the selected zoom portion such that the border is translated substantially coincident with the translation of the selected zoom area.

Kaizuka et al. teaches of the invention of claims 11 and 31; Grossman and Kamatani do not expressly teach this limitation. Kaizuka Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client."

Kaizuka et al. teaches of the invention of claims 12 and 32; Grossman and Kamatani do not expressly teach this limitation. Kaizuka Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the

client side is to be zoomed out to display a wider range, the above-described zooming processing can be applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed.

Kaizuka et al. teaches of the invention of claims 13 and 33; Grossman and Kamatani do not expressly teach this limitation. As shown in Kaizuka Figures 3A – 3E and 8A – 8D, each image point from an original position in the selected zoom portion is translated to a final position when changing the relative size of the selected zoom area.

Kaizuka et al. teaches of the invention of claims 14 and 34; Grossman and Kamatani do not expressly teach this limitation. Kaizuka Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client."

Kaizuka et al. teaches of the invention of claims 15 and 35; Grossman and Kamatani do not expressly teach this limitation. Kaizuka Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the client side is to be zoomed out to display a wider range, the above-described zooming processing can be applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed. By performing the process of figures 3A – 3E and 8A – 8D in a manner opposite to that which the zoom area was originally changed, it can be seen that each image point in the

selected zoom area is translated along a substantially straight line from its final position to its stored original position when changing the relative size of the selected zoom point.

Kaizuka et al. teaches of the invention of claims 16 and 36; Grossman and Kamatani do not expressly teach this limitation. Figure 19A shows an image with a plurality of arrows positioned next to the image for scrolling purposes. When scrolling an image, the positions of the image points in the image will be changed to updated positions. Thus, the final and original as well as each of the image points will be changed to an updated position. Column 14, lines 65 – 67, and column 15, lines 1 – 2, describe a data storage section to store image data for zoom processing. "More specifically, until image data in the designated wide range is read out on the server and transferred to the client, stepwise zoom-out processing is performed using image data stored in the data storage section 18 of the client." Additionally, Column 14, lines 62 – 65, states, "When an image currently displayed on the image display section 17 on the client side is to be zoomed out to display a wider range, the above-described zooming processing can be applied." Thus, Kaizuka teaches of performing a zoom-out function in a manner opposite to that which the zoom area was originally changed. By performing the process of figures 3A – 3E and 8A – 8D in a manner opposite to that which the zoom area was originally changed with the updated scrolled image, it can be seen that each image point in the selected zoom area is translated along a substantially straight line from its changed final position to its changed original position when changing the relative size of the selected zoom point.

Kaizuka et al. teaches of the invention of claims 17 – 19 and 37 – 39; Grossman and Kamatani do not expressly teach this limitation. Kaizuka teaches of both a zoom-in and a zoom-out process whereby the two are performed in a manner opposite to each other. Thus, after performing a zoom-in and zoom-out process on an image, the original image is available to the user once again. Upon selecting a new zoom portion after having already changed the image by zooming in and out, the new zoom portion original position is its position before the relative size of the previously selected zoom point was changed. Additionally, as seen in figures 3A – 3E and 8A – 8D, the zoom portion is translated along an original zoom line that is a substantially straight line that passes through the new zoom point original position and extends between the display area central point and a display area edge point that is closes to the new zoom point. By translating the new zoom portion to the center of the frame, the relative size of the new zoom area is changed and occupies a position it would have occupied had the new zoom area been the previously selected zoom area. Thus, the new zoom area is moved from its present location as shown in figures 3A and 8A to a new position on the new zoom area original zoom line as shown in figures 3E and 8D.

Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman, Kamatani, and Kaizuka as applied to claims 9 and 29 above, respectively, and further in view of Conrad et al.

Kaizuka et al. teaches of the invention of claims 10 and 30 except removing the zoom symbol from the display area when the cursor symbol is moved; Grossman and Kamatani do not expressly teach this limitation. Kaizuka Column 17, lines 11 – 16,

describe displaying a cursor symbol in the display area. "On the displayed image shown in FIG. 8A, a mouse cursor 33 is moved to the central point or an arbitrary point of a rectangular region (the region has similar shape to the display frame 31, and the similitude ratio is determined in advance) as a zooming target, and the region to be enlarged is designated by clicking the mouse." Conrad et al. teaches of a graphical user interface that opens and closes enclosures when an object is dragged over a location on top of an icon or text representing a closed enclosure. Column 11, lines 17 – 27, describes removing a select icon when the cursor is moved through a designated area. "In FIGS. 15A and 15B, another alternative sequence is shown. In this sequence, a dragged icon 1501 is dragged over a folder. When this occurs, a select icon appears, such as an opened folder icon 1502 with a split pie symbol. The split pie has a first side 1503 and a second side 1504. If the user moves the cursor downward to the second side 1504, as illustrated in FIG. 15B, then the sprung open enclosure is opened. Alternatively, if the user moves the cursor upward into the first side 1503, then some other action may occur. If user moves the cursor through the split pie, then the select icon is removed and the original icon reappears." Thus, Conrad teaches of removing the select symbol when the cursor is moved from a certain location. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Kaizuka to include removing the zoom symbol from the display area when the cursor symbol is moved. One would have been motivated to make such a modification to Kaizuka so that when a zooming function is not being performed on the selected portion of an image, the zoom symbol is quickly removed when a user

moves the cursor symbol out of the zoom region, thus preventing any blocking of the image by the zoom symbol.

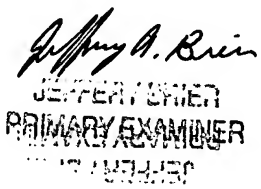
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V. Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-4:30 alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric Woods



September 16, 2005